

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A transmission line connecting structure comprising:

a transmission line including a dielectric substrate, an electrode formed on ~~one~~ a first side of the dielectric substrate, and a first slot having a predetermined width and formed ~~at~~ in the electrode, a plurality of such transmission lines being connected;

wherein an electrode of ~~one~~ a first of the plurality of transmission lines and an electrode of ~~another one~~ a second of the plurality of transmission lines are ~~provided~~ positioned at a distance from one another ~~with~~ to form a gap therebetween;

~~and~~ wherein a resonator is connected to ~~said each of the plurality of~~ transmission lines so as to be able to couple with ~~one another~~, one end of ~~the each~~ resonator is ~~being~~ open on ~~the gap side~~ a side thereof facing the gap, ~~the resonator is provided at each electrode so as to be able to couple with one another;~~

~~and~~ wherein at least one stub for suppressing leakage of a signal in the gap between the plurality of electrodes is provided ~~at~~ in at least one electrode of ~~said the~~ plurality of transmission lines ~~electrodes~~;

and wherein, when the wavelength of a ~~high frequency~~ signal in odd mode which propagates ~~said the~~ transmission line is λg_{odd} , ~~the~~ a length of the stub is set to ~~the approximate value of approximately~~ $\lambda g_{\text{odd}}/4$, and ~~the~~ a length between ~~said the~~ resonator and ~~the~~ stub is set to ~~a value sufficiently smaller than~~ $\lambda g_{\text{odd}}/2$.

2. (Currently amended) The ~~A~~ transmission line connecting structure according to claim 1, further comprising:

~~a transmission line including a dielectric substrate, an~~

a second electrode formed on a second ~~each~~ side of the dielectric substrate opposite the first side; ~~and~~

a second slot formed in the second electrode, the second slot having a predetermined width and opposing the first slot, each slot opposing one another while sandwiching said dielectric substrate, the slot being formed at each electrode, a plurality of such transmission lines being connected; and

wherein an electrode of one of the plurality of transmission lines and another electrode of another one of the plurality of transmission lines are provided at a distance from one another with a gap therebetween;

and wherein a second resonator is connected to the second electrode said transmission line, one end of the second resonator being is open on a side thereof facing the gap side, the resonator is provided at each electrode so as to be able to couple with one another;

and wherein a stub for suppressing leakage of a signal in the gap between the plurality of electrodes is provided at at least one of said plurality of electrodes;

and wherein, when the wavelength of a high frequency signal in odd mode which propagates said transmission line is λ_{g_odd} , the length of the stub is set to the approximate value of $\lambda_{g_odd}/4$, and the length between said resonator and stub is set to a value sufficiently smaller than $\lambda_{g_odd}/2$.

3. (Currently amended) A transmission line connecting structure comprising:

a transmission line including a dielectric substrate, an electrode formed on ~~one~~ a first side of the dielectric substrate, and a first slot having a predetermined width and formed at in the electrode, a plurality of such transmission lines being connected;

wherein an electrode of ~~one~~ a first of the plurality of transmission lines and an electrode of ~~another one~~ as second of the plurality of transmission lines are ~~provided~~ positioned at a distance from one another ~~with~~ to form a gap therebetween;

~~and wherein a resonator is connected to said each of the plurality of~~
~~transmission lines so as to be able to couple with one another, one end of the each~~
~~resonator is being open on a side thereof facing the gap side, the resonator is provided~~
~~at each electrode so as to be able to couple with one another;~~

~~and wherein at least one stub for suppressing leakage of a signal in the gap~~
~~between the plurality of electrodes is provided at in at least one of said the plurality of~~
~~electrodestransmission lines;~~

~~and wherein when the wavelength of a high-frequency signal in odd mode~~
~~which propagates said the transmission line is λg_{odd} , the a length of the stub is set to~~
~~the approximate value of approximately $\lambda g_{\text{odd}}/4$, and the a length between said the~~
~~resonator and the stub is set to the approximate value of approximately $\lambda g_{\text{odd}}/2$.~~

4. (Currently amended) A ~~The~~ transmission line connecting structure
according to claim 3, further comprising:

~~a transmission line including a dielectric substrate, an~~

~~a second electrode formed on each a second side of the dielectric substrate~~
~~opposite the first side; and~~

~~a second slot formed in the second electrode, the second slot having a~~
~~predetermined width and opposing the first slot, each slot opposing one another while~~
~~sandwiching said dielectric substrate, the slot being formed at each electrode, a~~
~~plurality of such transmission lines being connected; and~~

~~wherein an electrode of one of the plurality of transmission lines and an~~
~~electrode of another one of the plurality of transmission lines are provided at a distance~~
~~from one another with a gap therebetween;~~

~~and wherein a second resonator is connected to the second electrode said~~
~~transmission line, one end of the second resonator is being open on a side thereof facing~~

~~the gap side, the resonator is provided at each electrode so as to be able to couple with one another;~~

~~and wherein a stub for suppressing leakage of a signal in the gap between the plurality of electrodes is provided at at least one of said plurality of electrodes;~~

~~and wherein, when the wavelength of a high frequency signal in odd mode which propagates said transmission line is λ_{g_odd} , the length of the stub is set to the approximate value of $\lambda_{g_odd}/4$, and the length between said resonator and stub is set to the approximate value of $\lambda_{g_odd}/2$.~~

5. (Currently amended) A transmission/reception device ~~using~~ comprising a transmission line connecting structure according to claim 1 ~~one of the Claims 1 through 4~~.

6. (New) The transmission line connecting structure according to claim 1, wherein an end portion of the at least one stub is in a circular arc shape.

7. (New) The transmission line connecting structure according to claim 1, wherein the at least one stub is folded back at a midpoint thereof.

8. (New) The transmission line connecting structure according to claim 1, wherein the at least one stub is circular in shape.

9. (New) The transmission line connecting structure according to claim 1, wherein the at least one stub has a fan shape.

10. (New) The transmission line connecting structure according to claim 3, wherein an end portion of the at least one stub is in a circular arc shape.

11. (New) The transmission line connecting structure according to claim 3, wherein the at least one stub is folded back at a midpoint thereof.

12. (New) The transmission line connecting structure according to claim 3, wherein the at least one stub is circular in shape.

13. (New) The transmission line connecting structure according to claim 3, wherein the at least one stub has a fan shape.

14. (New) A transmission line connecting structure comprising:
a transmission line including:
a dielectric substrate;
an electrode formed on at least one side of the dielectric substrate;
a slot having a predetermined width formed in the electrode;
a resonator provided in the electrode, one end of the resonator being open;
and
a stub for suppressing leakage of a signal in the transmission line.

15. (New) The transmission line connecting structure according to claim 14, wherein, when a wavelength of a signal in an odd mode which propagates the transmission line is λ_{g_odd} , a length of the stub is approximately $\lambda_{g_odd}/4$, and a length between the resonator and the stub is smaller than $\lambda_{g_odd}/2$.

16. (New) The transmission line connecting structure according to claim 14, wherein, when the wavelength of a signal in an odd mode which propagates the transmission line is λ_{g_odd} , a length of the stub is approximately $\lambda_{g_odd}/4$, and a length between the resonator and the stub is approximately $\lambda_{g_odd}/2$.

17. (New) The transmission line connecting structure according to claim 14, wherein an end portion of the at least one stub is in a circular arc shape.

18. (New) The transmission line connecting structure according to claim 14, wherein the at least one stub is folded back at a midpoint thereof.

19. (New) The transmission line connecting structure according to claim 14, wherein the at least one stub is circular in shape.

20. (New) The transmission line connecting structure according to claim 14, wherein the at least one stub has a fan shape.